

## **A framework of secure KMS with RBAC implementation**

### **ABSTRACT**

Knowledge Management System (KMS) is a tool to support knowledge management (KM) and nowadays it has been a priority to the organizations as to protect the organization intellectual assets. The evolution of internet has brought KMS becomes more powerful while it can serve users in collaborative system. However, though the excitement of expanding KMS capabilities, security issue is critical due to the access and sharing knowledge which from distributed locations. Mostly the issues are regard to the restriction of the access permission to knowledge. Therefore, there is a need to construct a security model towards secure KMS, for managing access restriction in order to avoid unauthorized access as well as to protect knowledge throughout KM activities. Thus, this paper review the characteristics of collaborative KMS in order to ensure that Role Based Access Control (RBAC) is competent to perform as a security model for KMS and at the same time maintain the advantages of such collaborative system. Consequently, the model of Role Based Access Control- Knowledge Management System (RBAC-KMS) has been formulated which concerning three elements; RBAC, KMS and Information Security (IS). Moreover, the quality dimension model also has been constructed which can be the metrics for quality measurement of RBAC-KMS.

**Keyword:** Collaborative KMS; Secure KMS; Role based access control; Quality dimension